

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method for generating a plasma as a source of radiation by irradiating a pulsed laser on material, wherein
droplets are generated from liquid including fine particles,
a density of particles in said droplets is increased by vaporizing a solvent with an
infrared heating source, including using weak laser irradiation,
a particle-cluster in which large number of fine particles aggregate is formed after
condensation of said droplets, and
a pulsed laser for generating a plasma irradiates said particle-cluster ~~said material is a~~
~~particle-cluster which consists of many particles coupled with each other by a molecular~~
~~force, an electrical force, or a binder made of a material which vaporizes at temperature lower~~
~~than the melting point of said particles.~~

Claim 2 (Currently Amended): The method according to claim 1, further comprising:
a method of cracking the particle-cluster to disperse aggregating particles prior to
plasma generation using at least one of ~~with a help of~~ a thermal, an electrical, and ~~[[or]]~~ a
mechanical shock with heating by at least one of the irradiation of a laser and ~~[[,]]~~ charged
particle beam, ~~or other means.~~

Claim 3 (Currently Amended): The method according to claim 1, wherein droplets of
liquid including fine particles are formed by giving a vibration to a nozzle through which said
liquid is ejected ~~particles forming a particle-cluster are mixed in a liquid at room temperature~~
~~or in a fluid which liquefies by cooling, thus prepared suspension is ejected to form a droplet,~~

~~and a particle cluster is formed by vaporization of a solvent which serves as a binder of particles.~~

Claim 4 (Currently Amended): The method according to claim 1, wherein at least one of a liquid nitrogen, a water, and ~~[[or]]~~ an organic solvent is employed as a solvent of the suspension liquid.

Claim 5 (Currently Amended): The method according to claim 3, wherein particles in ~~[[the]]~~ a suspension liquid in a reservoir are uniformly distributed in order to reduce fluctuation of number of particles in the particle-cluster by at least one of controlling the potential of Hydrogen in the suspension liquid and ~~[[and/or]]~~ by stirring the suspension ~~or by other means.~~

Claim 6 (Previously Presented): The method according to claim 3, wherein a nozzle ejecting a suspension liquid is vibrated regularly for droplet generation.

Claim 7 (Previously Presented): The method according to claim 6, wherein a frequency of vibration is between 100 Hz and 1 MHz.

Claim 8 (Previously Presented): The method according to claim 6, wherein amplitude of vibration is larger than 1 μm .

Claim 9 (Currently Amended): The method according to claim 3, wherein at least one of vaporization and ~~[[or]]~~ sublimation of a solvent of a droplet is performed in a separate space before delivering a droplet of a suspension to a plasma generation space.

Claim 10 (Currently Amended): The method according to claim 9, wherein at least one of vaporization and [[or]] sublimation of a solvent of droplets is enhanced by heating droplets by laser irradiation ~~or other means~~.

Claim 11 (Currently Amended): The method according to claim 1, further comprising:

a method of charging a particle-cluster; and

a method of electrically controlling the trajectory of a particle-cluster.

Claim 12 (Currently Amended): The method according to claim 1, wherein particles constituting a particle-cluster is smaller than 1 μm in diameter.

Claim 13 (Currently Amended): The method according to claim 1, wherein particles constituting a particle-cluster contain at least one of tin, tin oxide, and [[or]] other tin compounds.

Claim 14 (Currently Amended): The method according to claim 1, wherein a total mass of particles constituting a particle-cluster is larger than that of a single particle with solid-state density having a diameter of 5 μm .

Claim 15 (Currently Amended): The method according to claim 1, wherein a total mass of particles constituting a particle-cluster is smaller than that of a single particle with solid-state density having a diameter of 200 μm .

Claim 16 (Currently Amended): The method according to claim 1, wherein particles constituting a particle-cluster are generated by the laser ablation of at least one of a liquid target and ~~[[or]]~~ a solid target, ~~which includes~~ including a chemical element comprising~~[[,]]~~ said particles.

Claim 17 (Currently Amended): A method for generating a plasma as a source of radiation by irradiating a pulsed laser on material, wherein
generation of fine particles by irradiating a short pulse on at least one of a solid target ~~[[or]]~~ and a liquid target is performed in the environment where a gas flows, and the generated particles are conveyed by the gas flow into a plasma generation space.

Claim 18 (Currently Amended): An apparatus for generating a plasma as a source of radiation by irradiating a pulsed laser on material, wherein
droplets are generated from liquid including fine particles,
the density of particles in said droplets is increased by vaporizing a solvent with an infrared heating source, including using weak laser irradiation,
a particle-cluster in which large number of fine particles aggregate is formed after condensation of said droplets,
and a pulsed laser for generating a plasma irradiates said particle-cluster ~~said material is a particle-cluster which consists of many particles coupled with each other by a molecular force, an electrical force, or a binder made of a material which vaporizes at temperature lower than the melting point of said particles.~~

Claim 19 (Currently Amended): The apparatus according to claim 18, further comprising:

a method of cracking a particle-cluster to disperse aggregating particles prior to plasma generation using at least one of ~~with a help of~~ a thermal, an electrical, and ~~and~~ [[or]] a mechanical shock with heating by at least one of the irradiation of a laser and ~~and~~ [[,]] charged particle beam, ~~or other means.~~

Claim 20 (Currently Amended): The apparatus according to claim 18, wherein droplets of liquid including fine particles is formed by giving a vibration to a nozzle through which said liquid is ejected ~~particles forming a particle-cluster are mixed in a liquid at room temperature or in a fluid which liquefies by cooling, thus prepared suspension is ejected to form a droplet, and a particle-cluster is formed by vaporization of a solvent which serves as a binder of particles.~~

Claim 21 (Currently Amended): The apparatus according to claim 18, wherein at least one of a liquid nitrogen, water, [[or]] and an organic solvent is employed as a solvent of the suspension liquid.

Claim 22 (Currently Amended): The apparatus according to claim 20, wherein particles in ~~[[the]]~~ a suspension liquid in a reservoir are uniformly distributed in order to reduce fluctuation of number of particles in a particle-cluster by at least one of controlling the potential of Hydrogen of the suspension and ~~and/or~~ [[and/or]] by stirring the suspension.

Claim 23 (Previously Presented): The apparatus according to claim 20, wherein a nozzle ejecting a suspension liquid is vibrated regularly for stable plasma generation.

Claim 24 (Previously Presented): The apparatus according to claim 23, wherein a frequency of vibration is between 100 Hz and 1 MHz.

Claim 25 (Previously Presented): The apparatus according to claim 23, wherein amplitude of vibration is larger than 1 μm .

Claim 26 (Currently Amended): The apparatus according to claim 20, wherein at least one of vaporization and ~~[[or]]~~ sublimation of a solvent of a droplet is performed in a separate space before delivery to a plasma generation space.

Claim 27 (Previously Presented): The apparatus according to claim 26, wherein at least one of vaporization and ~~[[or]]~~ sublimation of solvent of droplets is enhanced by heating droplets by laser irradiation ~~or other means~~.

Claim 28 (Currently Amended): The apparatus according to claim 18, further comprising:
a method of charging a particle-cluster and a method of electrically controlling the trajectory of a particle-cluster.

Claim 29 (Currently Amended): The apparatus according to claim 18, wherein particles constituting a particle-cluster is smaller than 1 μm in diameter.

Claim 30 (Currently Amended): The apparatus according to claim 18, wherein particles constituting a particle-cluster contain at least one of tin, tin oxide, and ~~[[or]]~~ other tin compounds.

Claim 31 (Currently Amended): The apparatus according to claim 18, wherein a total mass of particles constituting a particle-cluster is larger than that of a single particle with solid-state density having a diameter of 5 μm .

Claim 32 (Currently Amended): The apparatus according to claim 18, wherein a total mass of particles constituting a particle-cluster is smaller than that of a single particle with solid-state density having a diameter of 200 μm .

Claim 33 (Currently Amended): The apparatus according to claim 18, wherein a particles constituting a particle-cluster are generated by the laser ablation of at least one of a liquid target and [[or]] a solid target.

Claim 34 (Currently Amended): An apparatus for generating a plasma as a source of radiation by irradiating a pulsed laser on material, wherein

generation of small particles by irradiating a short pulse on at least one of a solid target and [[or]] a liquid target is performed in the environment where a gas flows and the generated particles are conveyed by the gas flow into a plasma generation space.